

BEST AVAILABLE COPYLin et al
USSN 09/821,291
Filed March 29, 2001

This listing of claims will replace all prior versions, and listings, of claims in the application:

In The Claims:

Listing of Claims

1. (Currently Amended) A method of extruding structural members comprising:
 - (a) providing an alloy comprising:
 - about 3.6 to about 4.2 wt.% copper,
 - about 1.0 to about 1.6 wt.% magnesium,
 - about 0.3 to about 0.8 wt.% manganese,
 - about 0.05 to about 0.25 wt.% zirconium,
 - the balance substantially aluminum, incidental elements and impurities;
 - (b) homogenizing said alloy at a ~~temperature between to a~~ temperature between about 855° and 880°F prior to extruding said alloy at a temperature within about 500° to about 750°F to form an extrusion;
 - (c) solution heat treating said extrusion; and
 - (d) quenching said extrusion before making a structural member therefrom.
2. (Currently Amended) The method of claim 1 wherein the extruding temperature in step (b) is about 550° to about 650°F.
3. (Currently Amended) The method of claim 1 wherein the extruding

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temperature in step (b) is about 600° to about 650°F.

4. (Original) The method of claim 1 which further includes:

(e) stretching said extrusion by at least about 1%.

5. (Currently Amended) The method of claim + 27 which further includes:

(e) stretching said extrusion between about 1 to about 10%.

6. (Currently Amended) The method of claim + 27 which further includes:

(c) stretching said extrusion between about 1 to about 8%.

7. (Currently Amended) The method of claim + 27 which further includes:

(e) stretching said extrusion between about 1 to about 3%.

8. (Currently Amended) The method of claim + 27 which further includes:

(e) stretching said extrusion by at least about 1%, said extrusion having less than about 50% volume recrystallized after stretching.

9. (Currently Amended) The method of claim + 27 which further includes

in step (e):

(f) (e) stretching said extrusion by at least about 1%, said extrusion being substantially unrecrystallized.

10. (Currently Amended) The method of claim + 27 which further includes

in step (e):

(e) stretching said extrusion by at least about 1%; said extrusion having a longitudinal yield strength of at least about 50 ksi and a longitudinal tensile ultimate strength of at least about 70 ksi.

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11.-26. (Previously Cancelled).

27. (Currently Amended) A method of extruding structural members consisting essentially of:

- (a) providing an alloy comprising:
 - about 3.6 to about 4.2 wt.% copper,
 - about 1.0 to about 1.6 wt.% magnesium,
 - about 0.3 to about 0.8 wt.% manganese,
 - about 0.05 to about 0.25 wt.% zirconium,
 - the balance substantially aluminum, incidental elements and impurities;
- (b) extruding said alloy at a temperature $[[_]]$ within about 500° to about 750°J to form an extrusion;
- (c) solution heat treating said extrusion;
- (d) quenching said extrusion before making a structural member therefrom; and
- (e) stretching said extrusion by at least about 1%.

28. (Currently Amended) A method of extruding structural members having a combination of high strength and toughness, said method comprising:

- (a) providing an alloy comprising:
 - about 3.6 to about 4.2 wt.% copper,
 - about 1.0 to about 1.6 wt.% magnesium,

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about 3.6 to about 4.2 wt.% copper,
about 1.0 to about 1.6 wt.% magnesium,
about 0.3 to about 0.8 wt.% manganese,
about 0.05 to about 0.25 wt.% zirconium,
the balance substantially aluminum, incidental elements and
impurities;

(b) homogenizing said alloy at ~~a temperature between to a~~
temperature between about 855° and 880°F prior to extruding said alloy at a temperature
with about 500° to about 750°F to form an extrusion;

(c) solution heat treating said extrusion; and

(d) quenching said extrusion before making a structural member
therefrom.